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involves both the applicable implementation of the inservice inspection requirements of the ASME Code Section XI and the augmented inspection activities of the EPRI MRP as the primary bases for this program.

The staff also noted that the PWR Vessel Internals Program includes LRA Commitment No. 25, which calls for the applicant to submit its inspection plan for the PINGP RVI components to the NRC for review and approval at least two years prior to entering the period of extended operation, and for the submittal to identify any deviations between the AMR items and AMP program elements for the PINGP RVI components from those that will be developed and approved by the staff through its review of Report No. MRP-227-Rev. 0. The staff verified that the applicant placed Commitment No. 25 on the LRA in the applicant's letter of June 24, 2009. Open Item 3.0.3.1.21, Part 2 is resolved with respect to updating the contents of Commitment No. 25 relative to this plant-specific AMP.

Based on this review, the staff determined that the information in the UFSAR supplement is an adequate summary description of the program, as required by 10 CFR 54.21(d).

Conclusion. On the basis of its technical review of the applicant's PWR Vessel Internals Program, the staff concludes that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation, as required by 10 CFR 54.21(a)(3). The staff also reviewed the UFSAR supplement for this AMP and concludes that it provides an adequate summary description of the program, as required by 10 CFR 54.21(d).

3.0.4 Quality Assurance Program Attributes Integral to Aging Management Programs

3.0.4.1 Summary of Technical Information in Application

In Appendix A, "UFSAR Supplement," Section A2.0, "Summary Descriptions of Programs that Manage the Effects of Aging," and Appendix B, "Aging Management Programs," Section B1.3, "Quality Assurance Program and Administrative Controls," of the LRA, the applicant described the elements of corrective action, confirmation process, and administrative controls that are applied to the AMPs for both safety-related and nonsafety-related components. The PINGP quality assurance program (QAP) is used which includes the elements of corrective action, confirmation process, and administrative controls. Corrective actions, confirmation process, and administrative controls are applied in accordance with the QAP regardless of the safety classification of the components. Section A2.0 and Section B1.3, of the LRA state that the QAP implements the requirements of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and is consistent with the NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants (SRP-LR)," Revision 1.

3.0.4.2 Staff Evaluation

Pursuant to 10 CFR 54.21(a)(3), an applicant is required to demonstrate that the effects of aging on SCs subject to an AMR will be adequately managed so that their intended functions will be maintained consistent with the CLB for the period of extended operation. The SRP-LR,

Branch Technical Position RLSB-1, "Aging Management Review - Generic," describes ten attributes of an acceptable AMP. Three of these 10 attributes are associated with the (QA) activities of corrective action, confirmation process, and administrative controls. Table A.1-1, "Elements of an Aging Management Program for License Renewal," of Branch Technical Position RLSB-1 provides the following description of these quality attributes:

- Attribute No. 7 - Corrective Actions, including root cause determination and prevention of recurrence, should be timely;
- Attribute No. 8 - Confirmation Process, which should ensure that preventive actions are adequate and that appropriate corrective actions have been completed and are effective; and,
- Attribute No. 9 - Administrative Controls, which should provide a formal review and approval process.

The SRP-LR, Branch Technical Position IQMB-1, "Quality Assurance for Aging Management Programs," states that those aspects of the AMP that affect quality of safety-related SSCs are subject to the QA requirements of 10 CFR Part 50, Appendix B. Additionally, for nonsafety-related SCs subject to an AMR, the applicant's existing 10 CFR Part 50, Appendix B, QAP may be used to address the elements of corrective action, confirmation process, and administrative control. Branch Technical Position IQMB-1 provides the following guidance with regard to the QA attributes of AMPs:

Safety-related SCs are subject to Appendix B to 10 CFR Part 50 requirements which are adequate to address all quality related aspects of an AMP consistent with the CLB of the facility for the period of extended operation. For nonsafety-related SCs that are subject to an AMR for license renewal, an applicant has an option to expand the scope of its Appendix B to 10 CFR Part 50 program to include these SCs to address corrective action, confirmation process, and administrative control for aging management during the period of extended operation. In this case, the applicant should document such a commitment in the Final Safety Analysis Report supplement in accordance with 10 CFR 54.21(d).

The NRC staff reviewed the applicant's AMPs described in Appendix A and Appendix B of the LRA, and the associated implementing procedures. The purpose of this review was to ensure that the QA attributes (corrective action, confirmation process, and administrative controls) were consistent with the staff's guidance described in Branch Technical Position IQMB-1. Based on the NRC staff's evaluation, the descriptions of the AMPs and their associated quality attributes provided in Appendix A, Section A2.0, and Appendix B, Section B1.3, of the LRA are consistent with the staff's position regarding QA for aging management.

3.0.4.3 Conclusion

On the basis of the NRC staff's evaluation, the descriptions and applicability of the plant-specific AMPs and their associated quality attributes provided in Appendix A, Section A2.0, and Appendix B, Section B1.3 of the LRA, were determined to be consistent with the staff's position regarding QA for aging management. The staff concludes that the QA attributes

(corrective action, confirmation process, and administrative control) of the applicant's AMPs are consistent with 10 CFR 54.21(a)(3).

3.1 Aging Management of Reactor Vessel, Internals and Reactor Coolant System

This section of the SER documents the staff's review of the applicant's AMR results for the reactor vessel, internals, and reactor coolant system components and component groups of:

- pressurizer system
- reactor coolant system
- reactor internals system
- reactor vessel system
- steam generator system

3.1.1 Summary of Technical Information in the Application

LRA Section 3.1 provides AMR results for the reactor vessel, internals, and reactor coolant systems components and component groups. LRA Table 3.1.1, "Summary of Aging Management Evaluations in Chapter IV of NUREG-1801 for Reactor Vessel, Internals, and Reactor Coolant," is a summary comparison of the applicant's AMRs with those evaluated in the GALL Report for the ESF systems components and component groups.

The applicant's AMRs evaluated and incorporated applicable plant-specific and industry OE in the determination of AERMs. The plant-specific evaluation included CRs and discussions with appropriate site personnel to identify AERMs. The applicant's review of industry OE included a review of the GALL Report and OE issues identified since the issuance of the GALL Report.

3.1.2 Staff Evaluation

The staff reviewed LRA Section 3.1 to determine whether the applicant provided sufficient information to demonstrate that the effects of aging for the reactor vessel, RVIs, and reactor coolant system components within the scope of license renewal and subject to an AMR, will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation, as required by 10 CFR 54.21(a)(3).

The staff conducted a review of the AMR items that the applicant had identified as being consistent with the GALL Report to ensure the applicant's claim that certain AMRs were consistent with the GALL Report. The staff did not repeat its review of the matters described in the GALL Report; however, the staff did verify that the material presented in the LRA was applicable and that the applicant identified the appropriate GALL Report AMRs. The staff's evaluations of the AMPs are documented in SER Section 3.0.3. Details of the staff's review are documented in SER Section 3.1.2.1.

During the onsite audit, the staff also selected AMRs consistent with the GALL Report and for which further evaluation is recommended. The staff confirmed that the applicant's further evaluations were consistent with the SRP-LR Section 3.1.2.2 acceptance criteria. The staff's audit evaluations are documented in SER Section 3.1.2.2.